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AMERICAN NURSERYMAN

The Nurseryman's Forte: To Make America More Beautiful and Fruitful

SEPTEMBER 1, 1935



PHELLODENDRON AMURENSE

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American Saxifrages
Sour Cherry Outlook
Late-Flowering Plants

AMERICAN NURSERYMAN

Chief Exponent of the Nursery Trade

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NATIONAL ARBORETUM.

When the A. A. N. met at Cincinnati, its committee on arboreta and botanical gardens had just received word of the bill proposed by Congressman Keller to coordinate the direction of the national botanical garden at the capital under the joint committee of the Library of Congress. This required some study, and Robert Pyle, therefore, deferred his report as chairman of the committee. It is now published on another page of this issue and is worth thorough reading by every nurseryman for several reasons. One is that public interest in arboreta is increasing, and institutions of that character are assuming greater importance in several sections of the country. Nurserymen are presumably interested in such enterprises, not only for their own instruction, but as a means of support and promotion to that phase of horticulture with which they are most concerned.

Most important of all is the development, though slow, of some kind of national institution at Washington, D. C., which may eventually take rank with the famous gardens in the capitals of principal European countries. At present there is divergence of opinions and plans of those closest to the furtherance of this project. So long as Congressmen and various departments of the government differ as to the lines along which a national botanical garden shall be developed, progress will be slow. But if the commercial and amateur horticultural interests of this country unite behind a project which will best serve their wants and the needs of the nation, there may be a better chance to win common support at Washington, and consequently advance the project.

SOCIAL SECURITY ACT.

The social security law enacted by Congress and signed by the President this month represents one of the most remarkable steps in the legislative program under the New Deal. For the first time in the nation's history, a plan has been set up for old-age assistance, old-age pensions and unemployment insurance. The program is to be financed by

three new taxes, two on the employer and one on the employee, each measured by a certain percentage of taxable pay roll. At the maximum rates, several years hence, these taxes are expected to raise approximately \$2,700,000,000 a year.

Already readers of American Nurseryman have asked as to pay roll taxes to which they will become subject under this law. For their relief, it may be stated at the outset that no tax will be collected until January, 1937, and that will be in the amount of one per cent of his pay roll, paid by the employer. No taxes are imposed on employees during the calendar year 1936, and hence employers are under no obligation to withhold any tax from the wages paid to employees during that year.

So there is time, plenty of it, to learn the details of the social security program, much of which must be formulated by those responsible for the enforcement of the act. Furthermore, a large part of the program hinges upon state laws, for credits to employers in respect to federal taxes are to be made where payments are made under a state unemployment-insurance law. If the program is to be carried out, it will be necessary for many states to pass such a law.

Some question exists as to the constitutionality of the law, or at least some of its provisions. Altogether, there is much to be determined as to the effect of this legislation, but since it is not immediately operative, employers will have due time to obtain information and to study the regulations.

MORE ON OXYDENDRUM.

More than the usual attention was received by the cover illustration on our issue of August 1, picturing *Oxydendrum arboreum*. Because of that fact, readers may be interested in an excerpt from the August 7 bulletin of popular information issued by the Arnold Arboretum, which speaks of the lovely sourwood as being in full flower at the moment, adding:

"In the last two decades the original specimens of this species in the collections of the Arnold Arboretum have attained full maturity and have been supplemented by additional plantings, so that they now make quite a showing along the north side of Hemlock Hill. The individual flowers are small, and only greenish white, but they are borne in great spidery panicles, which droop gracefully outward and downward as they develop in long, sweeping curves. Since *oxydendrum* is, in truth, a small tree, rather than a large bush, these large, interlacing panicles produce a graceful cobwebby effect above the branches. Nor are the flowers the tree's only recommendation. Like many other members of the heath family, its leaves color splendidly in the fall, but whereas the clear red papules of a blueberry bush are more or less hidden under foot, the same colors in a sourwood are carried by large leaves high up in the air, and of all the fall colorings at the Arnold Arboretum, none are more rich and varied, none lovelier in the delicate shadings from rose-red to purple to brown."

The Mirror of the Trade

PHELLODENDRON AMURENSE.

Not often are superlatives used in regard to the specimen trees and shrubs pictured in our cover illustrations, handsome though we think they are, but L. L. Blundell, professor of horticulture at Massachusetts State College, is authority for the statement that the *Phellodendron amurense* pictured on this issue is "the largest, finest and most beautiful specimen of this particular species in the country."

The picture was taken July 26, when a day's program was given for nurserymen during farm and home week, and Professor Blundell conducted a tour of the campus at Amherst, where there is a good collection of trees and shrubs adapted to the region. The figures in the nurserymen's class in the picture admirably show the scale of the tree. Its present height is seventy-five feet; its spread is the same. The diameter breast high is thirty-four inches, and the girth, 103 inches. The large mass of foliage to the left rear is of the Yama cherry, *Prunus serrulata sachalinensis*, and to the right rear are large magnolias, *M. hypoleuca*, *Soulangiana* and *conspicua*.

The Yama cherry, as well as the *phellodendron*, was introduced in 1877 by W. S. Clark, president of the Massachusetts Agricultural College, who had gone to Japan in 1876 to establish a similar institution at Sapporo, Japan. Being interested in woody plant material, he sent back seeds of many plants, some of which were the original introduction of the particular species. Among these were the Japanese tree lilac, *Syringa japonica*; *Katsura* tree, *Cercidiphyllum japonica*; many forms of Japanese maple, *Acer japonica*; *Acer Shirasawanum*; umbrella pine, *Sciadopitys verticillata*, and the Japanese elm, *Ulmus japonica*, the last introduced by Dr. William P. Brooks on his return in 1890.

While Dr. Clark was credited with introducing *Phellodendron sachalinense*, the specimen at Amherst is *Phellodendron amurense*, a male *Amur* cork tree. Five or six closely related species in this country came from eastern Asia. These cork trees are usually medium-size trees, with rather stout, spreading branches, forming a round, broad head, with large leaves of aromatic odor when bruised and turning yellow in autumn. The inconspicuous greenish flowers are followed by black berry-like fruits remaining on the tree a long time after the leaves have fallen. *P. amurense* and *sachalinense* are hardy north, while the other species, *Lavallei*, *japonicum* and *chinense*, seem somewhat tender, though they have proved hardy as far north as Massachusetts. They are of rapid growth when young and seem to thrive in almost any kind of soil. The species pictured here has been recommended as a street tree for western cities, as it resists drought and heat in summer and seems not to be attacked by insects.

Propagation is by seeds, which are produced freely when both sexes are planted, and by root cuttings dug up in fall and stored during the winter in sand or sphagnum moss. Cuttings taken from the tree in July with a heel of older wood will root in gentle heat.

AMERICAN NURSERYMAN

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The Chief Exponent of the American Nursery Trade

The Nurseryman's Forte:

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Vol. LXII

SEPTEMBER 1, 1935

No. 5

American Saxifrages

*Native Species of Extensive Family Merit Greater Gardening Favor,
Particularly Worth-while Varieties Described Here by C. W. Wood*

It is an encouraging sign to note the American gardeners who are beginning to grow saxifrages. This awakening has come rather late in our experience and was probably retarded by the disheartening advice of some early writers that our climate was not adapted to saxifrage culture. It is true, of course, that our eastern states offer trying conditions for such delicate species as *Saxifraga aphylla*, *S. imbricata* and a few others, but there are few gardens in the northern half of the United States that cannot offer proper growing conditions for a majority of the 500 or more species. It is true, too, that many of the earlier American trials of saxifrage culture were based upon recommendations which were particularly adapted to English conditions, and these were of practically no use to us in eastern states, for the growing conditions are entirely different. It was when we started to blaze our own trails that we really commenced to make headway with alpine plants. We have not yet, of course, come to the end of the trail, and we still have to learn. What we need most of all right now is more American experiences. If you have worked with alpinists under American conditions, will you share the results with other friends of The American Nurseryman?

The list of native saxifrages is not overly long, and of that abbreviated list, few are well known in our gardens. As it always does, time will change conditions, and growers who are prepared with stock when the change comes will be the ones to receive the benefit. Much of the material which will be mentioned is of especial interest to the neighborhood grower.

Saxifraga Bronchialis.

Saxifraga bronchialis and its forms *austromontana* and *cherlerioides* are confused, not only among gardeners, but also among botanists. None of these plants is common, and when one is seen, it is generally under false labels. I am not absolutely sure of my diagnosis (Engler's treatment of the genus is followed here), but it satisfies my interpretation of the authorities. According to that interpretation, most of the plants in American trade known as *S. bronchialis* are *S. austromontana*. The note in Bailey's *Cyclopedia of Horticulture* to the effect that "*S. austromontana* is probably not in cultivation" is probably

responsible, though unwittingly, for the assumption that we have *S. bronchialis* and not *S. austromontana*. Bailey's words were written when the few saxifrages we had were practically all grown from stock received from European sources and when few of our western mountain regions had contributed to our gardens. In that case the plant in question would have to be *S. bronchialis*, but much of the material now in the trade has been grown from material collected in the Rocky and Cascade mountains and is *S. austromontana*. The principal differences between the two species are as follows: *S. bronchialis* has creamy white flowers with orange red dots, while *S. austromontana* has white flowers made up of smaller petals (not clawed at the base) with reddish purple dots. The stems of *S. austromontana* are slender and often purple; the leaves are more awl-shaped and darker green. From the gardener's standpoint, it might be well to make *S. austromontana* a variety of *S. bronchialis*.

The third plant, *S. cherlerioides*, mentioned in the preceding paragraph is properly a variety of *S. bronchialis*. It grows in the region extending from Asia across the Bering strait country into North America. Some confusion in its naming will be noted by consulting European lists, where it is usually called *S. Stelleriana* and sometimes *S. Stelleriana*. It is the dwarfiest of the three saxifrages mentioned; its mossy foliage (not in the sense that the *dactyloides* section is usually termed mossies) hugs the ground. It is the most densely caespitose of the *aspera* group, growing in the tightest possible tufts. The foliage alone is a reward.

The culture of these three saxifrages is not easy in our eastern climate, though it is not impossible. In my experiments, the plants have done best in an acid soil on a northern exposure where they are shielded from the blistering sun. They need more than the average amount of moisture, *S. cherlerioides* requiring the most. All would probably do well in a wet moraine. They can be handled in a lath-shaded frame and may be easily grown from cuttings.

Saxifraga Caespitosa.

S. caespitosa (usually spelled *caespitosa* in lists) in some form is found throughout most of the high places including those of latitude as well as altitude, in

northern Asia, northern Europe and northern North America. The confusion that exists in the naming of the plants in the section previously mentioned is peaceful bliss compared to the pandemonium that reigns among the mossies, including *S. decipiens*, *S. hypnoides* and *S. moschata*, as well as *S. caespitosa*. The best advice that I can give is to grow as many kinds from seeds as you can obtain, select the best forms and produce them from cuttings. *S. caespitosa* is one of the true mossies and, with *S. decipiens*, is numbered among the easiest of this class. In the eastern states, these saxifrages thrive best in part shade, as on the north side of a rock or in the shade of an open-headed tree, but not where they are exposed to the drip of overhanging branches. They need a well drained soil and grow easily in a shaded frame. The species varies so much and has been a parent of so many hybrids that it is quite useless to attempt any descriptions. Any varieties that you are able to get will quite likely be worth the effort of growing them.

Boraphylla Group.

America is particularly rich in species of the *boraphylla* section, which includes *leucanthemifolia*, *micranthidifolia*, *punctata*, *Mertensiana*, *pennsylvanica*, *tennesseensis* and *virginensis*. All of these varieties are worth cultivating and undoubtedly will be of garden value as our interest in native plants increases. Species of the *boraphylla* section are characterized by basal rosettes of leaves, usually thick, and flowers in spikes or sprays. All that I have seen have white or whitish flowers, although the stamens of some species are so prominently contrasting in color as to give a pinkish or reddish cast to the entire flower. Consequently, *micranthidifolia* is spoken of in some European lists as being reddish, while as a matter of fact, all that I have grown were actually whitish. As a class, the *boraphyllas* want a constantly damp soil, preferably one containing peat, and, I believe, grow best in at least partial shade in our eastern climate. They may be grown from seeds or divisions.

Saxifraga Aizoon.

In any enumeration of American saxifrages, one should not overlook that cosmopolitan species, *S. Aizoon*. It is found

in the alpine and boreal regions of Asia and Europe, wandering through the arctic regions into North America and thence southward to New England and the Rockies. Among the incrustated species are the most easily cultivated saxifrages. It is in this group that the beginner may look with confidence to his first success. It is quite natural that a plant of so wide distribution as *S. aizoon* should vary as it adapts itself to the different conditions of its various habitats. Variations in *S. aizoon* are so pronounced that we find Farrer, a close student of alpine flora, saying, "My final conviction is that *S. aizoon* is a sort of Platonic Idea—an abstraction possibly existing in some supra-mortal state, but represented on earth only by innumerable varieties or partial manifestations of its sacred essence." One could fill a garden with *S. aizoon* and its offspring and still have a presentable picture—all at little trouble except the getting together of the plants, for they are of easy culture. Few, if any, of the incrustated species should give any trouble if they are given a rich, well drained soil and, if the climate is hot, some shade, especially during the middle of the day. They may be grown from cuttings, divisions or seeds.

Saxifraga oppositifolia.

In closing these notes I should like to say a few good words for *S. oppositifolia*, which spreads its beauty throughout the high places and cold sections of Asia, Europe and North America. In America it reaches south to northern New England (if collectors have missed a single plant) to Montana and Idaho in the west. Its northern home tells us it will not be easy to grow in a hot, dry climate, and its actual performance bears that out, although it can be handled by the careful gardener if it is given a damp spot in a northward-facing wall. In the nursery it is easy to grow in a shaded frame or in pots. The plant, as would naturally be expected in one of such wide distribution, varies much from the violet or rosy purple of the type through the crimson of variety *pyrenaica* to the pure white of variety *alba*, and in height it varies from two inches to a reported six or eight inches. It is quite likely, though, that the lush growth in the latter cases was caused by an overly rich soil, a condition that brings about growth of foliage at the expense of flowers. It has been my experience, at least, that the plant is never really floriferous unless it is grown in poor soil. Rightly handled, this plant should make a good item for the neighborhood grower.

LOUIS E. HILLENMEYER.

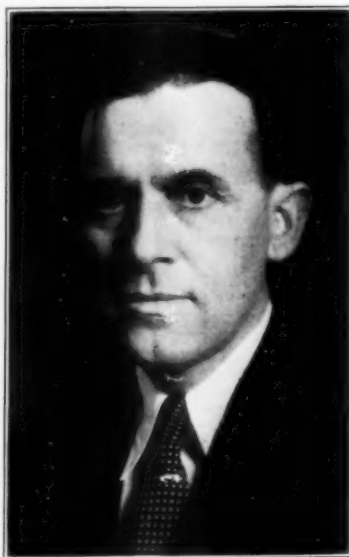
Louis E. Hillenmeyer, of the Hillenmeyer Nurseries, Lexington, Ky., who was reelected to the executive committee of the American Association of Nurserymen at this year's convention, has grown up in the nursery business. Born in 1885 at Lexington, he spent his youth about his father's nursery, which had been established by a grandfather, Xavier Hillenmeyer, in 1841. He attended the county schools and was later graduated from the University of Kentucky, in 1907, with a degree in agriculture.

Until 1910 Mr. Hillenmeyer was associated with his father in the business. At that time he formed a partnership with his brother, the late Walter W. Hillenmeyer, to conduct the business. The growing end and outside work have

claimed Louis Hillenmeyer's chief attention.

His activities in trade and other horticultural organizations have been numerous. He has served both the Kentucky Nurserymen's Association and the Kentucky Horticultural Society as president and in other capacities and has been on the executive committee of the Southern Nurserymen's Association.

Mr. Hillenmeyer is a member of the board of trustees of the University of Kentucky, Lexington, and interested in civic affairs, being connected with the local zoning and planning commission and the board of commerce. He is vice-president and a member of the board of governors of the Lexington Country Club, a director of the Hearst Home Insurance Co. and the Security Bank &



Louis E. Hillenmeyer.

Trust Co., Lexington, and a member and past president of the Lexington Rotary Club.

Mr. Hillenmeyer was married to Anna Bain, June 26, 1912, and has four children, Anna Bain, Louis, Dorothy and Robert.

CONNECTICUT HERBARIUM.

More than 100,000 different specimens of flowering plants, algae, lichens, fungi and hepatics, chiefly of Connecticut, are included in the herbarium of the agricultural experiment station at New Haven. This probably represents the largest state-owned collection in the United States, according to Dr. G. P. Clinton, station botanist. It has been built up gradually since the botany department was established in 1888, largely under the direction of Dr. Clinton, who has been botanist for more than thirty years. The latest acquisition is the donation of Dr. Clinton's private collection of about 10,000 specimens.

A NURSERY at Honolulu, T. H., has been started by E. J. Lord, who intends to grow fruits and vegetables new to the Hawaiian islands. A few litchi nut trees have been planted for experimental purposes.

AMERICAN NURSERYMAN

NUT GROWERS TO MEET.

The twenty-sixth annual meeting of the Northern Nut Growers' Association will be held at Rockport, Ind., September 9 and 10. J. F. Wilkinson, an active and enthusiastic nut grower and nurseryman at Rockport, has arranged an interesting and comprehensive program, announces G. L. Slate, secretary, Geneva, N. Y.

The first day will be devoted to talks and discussions. C. A. Reed, U.S.D.A., will discuss "Nut Varieties for the Middle Northern Zone" and also "The Pollination of Nut Trees." H. F. Stoke, Roanoke, Va., a pioneer in the commercial cracking and marketing of walnuts, will present his experiments along that line. Mr. Stoke is also an authority on the culture and varieties of blight-resistant chestnuts, which subject he will also present. Nut culture west of the Mississippi river will be discussed by Charles Stephens, Columbus, Kan. John W. Hershey, tree crop specialist for the Tennessee Valley Authority, will discuss "Why More Nut Trees Are Not Planted."

Prof. N. F. Drake, Fayetteville, Ark., will discuss "Black Walnut Varieties;" D. C. Snyder, Center Point, Ia., "The Most Promising Nut Varieties for Iowa," and J. G. Duis, Shattuck, Ill., "New Kaskaskia River Pecans and Hicans."

"Chestnut Growing in Southern Illinois" will be presented by R. B. Endicott. Prof. A. S. Colby, of the University of Illinois, will speak on "The Next Step in Illinois Nut Culture." H. C. Neville will present "The Value of the Pecan Industry in Southern Illinois." A. M. Whitford, Farina, Ill., will discuss "Simplified Nut Tree Propagation." Prof. Monroe McCown, of Purdue University, will present "Nut Trees in the Farm Planting Program." Prof. J. A. McClintock, also of Purdue, will talk on "Saving America's Nut Resources."

The recent prize nut contest of the association will be presented by Dr. W. C. Deming, chairman of the judging committee; the Ohio nut contest by C. F. Walker, of Cleveland, and the New York contest by L. H. MacDaniel's, of Cornell University.

Several other talks, chiefly of a general nature, have also been planned. A question box will be conducted, and new and old varieties of nuts will be exhibited. Exhibits of varieties and promising seedlings will be welcome and should be addressed to J. F. Wilkinson at Rockport. The meeting will be held in the assembly room of the courthouse.

The second day of the meeting will be devoted to a field trip. Mr. Wilkinson's nursery will be visited, where nut tree propagation will be demonstrated. A large commercial planting of more than 1,200 budded black walnuts, pecans, hybrids and hickories will also be seen. Several smaller plantings and top-worked trees are also in the vicinity. Perhaps the most interesting item for northern nut growers will be the immense groves of native seedling pecans for which the region is noted.

THE Felix Gillet Nursery, Nevada City, Cal., landscaped the grounds about a model home on Town Talk ridge, Nevada City, recently opened to the public.

THERE is no better form of advertising than a good letterhead. From it one obtains a glimpse of the character of the business behind it.

Outlook for Sour Cherry Trees

Information Throwing Light on Price and Production Trend of Popular Fruit Presented by H. B. Tukey, of New York Experiment Station

Since the planting of cherry trees is intimately connected with the economic condition of the cherry industry, it would seem worth while to digest carefully some information of reliable nature that may throw light on the trends in prices and production. Exactly this kind of information is now available for the sour cherry industry, or, as the canners prefer to call it, "the red cherry industry" or "the pitted red cherry industry" for reasons of consumer psychology. The publication is by Dr. R. E. Marshall, of Michigan State College, East Lansing, Mich., numbered special bulletin No. 258 and entitled "Production and Price Trends in the Pitted Red Cherry Industry."

Before beginning a review of this bulletin it may be well to mention that a recent agreement between New York producers and New York packers calls for a minimum price of $2\frac{1}{2}$ cents per pound. This is a price of 1 cent per pound above the 1934 price and suggests a hopeful upswing from the deplorable prices of the last few years. A price of $2\frac{1}{2}$ cents per pound, however, is hardly to be considered exceptional, even though it is an improvement.

Prices in the past have ranged from a high of 11 cents per pound in 1929, through $10\frac{1}{2}$ cents in 1921, $9\frac{1}{2}$ cents in 1927, for an average well above 6 cents for the years from 1914 to 1930. The result was an increase in sour cherry plantings. The figures for Michigan show an increase in plantings of 118 per cent from 1910 to 1920, and forty-two per cent from 1920 to 1930. By 1931 there were 1,910,000 trees in eleven counties in Michigan, and fifty-six per cent of these trees had not reached bearing age at that time. A somewhat comparable situation prevailed in other eastern cherry-producing states.

To continue the historical background, the crop of 1931 was the first of four consecutive crops to sell at ridiculously low figures—so low that producers generally made no profit. The combination of increased production, increased pack and a demoralized consumer demand apparently was too much for the cherry industry to meet successfully.

Total Cherry Pack.

The cherry pack, both frozen and canned, has averaged over 69,000,000 pounds for the 9-year period, 1926 to 1934. The lowest pack was 31,000,000 pounds in 1927, and the highest was 97,000,000 pounds in 1930. Of this average pack, New York state put up twenty-one per cent, Michigan twenty-nine per cent and Wisconsin eleven per cent. Approximately one-quarter of the pack is frozen, or "cold-packed." New York state has cold-packed fifty per cent of the total United States pack for the 9-year period, 1926 to 1934; Michigan has cold-packed nineteen per cent, and Wisconsin has cold-packed twenty-five per cent. Michigan receives the honors for canning, with forty-eight per cent of the canned pack to her credit for a similar period, against twenty-five per cent for New York state and thirteen per cent for Wisconsin. Apparently

New York state was the offender in the disastrous year of 1930 when New York cold-packed 22,000,000 pounds in that one season, compared with a 9-year average of 7,000,000 pounds. Small wonder that there was a carry-over of cold-pack cherries and a demoralized market!

In order to gauge the trend of the pack, the high pack of 1930 may be left from consideration. This gives a 4-year average prior to 1930 of about 57,000,000 pounds. For the 4-year period following 1930 the average is about 75,000,000 pounds. On this basis it is estimated by some that the pack from 1935 to 1939 will be in the neighborhood of 85,000,000 to 90,000,000 pounds, while others estimate a figure of close to 100,000,000 for the next five years.

It is computed that Michigan may be expected to produce 50,000,000 pounds during the next five years unless artificially limited. New York state is figured at 20,000,000 to 22,000,000 pounds, and Wisconsin at about 9,000,000.

Cold-pack Trends.

Frozen-pack cherries have a good record in the pie trade. Bakers say that the cherries have a richer color and support the pie crust better than canned cherries. At one time it was predicted that seventy-five per cent of the sour cherry pack would be frozen within five years. While this optimistic figure has not materialized, it is true that the demand for cold-pack cherries has increased steadily, although the packers were forced to slow up considerably after the heavy pack of 1930.

Prices for Cherries.

Some interesting figures are presented by Dr. Marshall in regard to prices and movements of frozen cherries, canned cherries in No. 10 cans and canned cherries in No. 2 cans. It is shown that during each of the crop years of 1931, 1932 and 1933 price reductions were necessary in order to avoid holding cherries in No. 2 cans until the following year. In fact, one of the important facts brought out in this study is the generally unsatisfactory distribution of cherries, particularly early in the season. It is shown that methods must be devised to move about two-thirds of the packs out of the canners' hands before January if the prices at the end of the season are not to decline.

Price Comparison with Other Fruits.

Prices of peaches, pears and apricots in No. 2 cans were 33 cents per dozen less than canned red cherries from January, 1930, to June, 1931. On the other hand, canned cherries sold for 16 cents per dozen less than these other fruits for the three years beginning with the 1931 pack. This price difference is said to be equivalent to about 1 cent per pound for fresh fruit delivered to the canner.

All of this seems to indicate that the red cherry industry fell into a series of unusually trying conditions about the time of the large 1930 pack. The canned and cold-pack cherries carried over from

this year tended to depress the cherry market below the market for other fruits and below the general commodity index. Not until this abnormal pack was cleaned up was there any indication of price increase.

Price Spread Between Canner, Grower.

There has been a disposition to blame the canner for not paying cherry growers more for their fruit. A study of the figures on spread between what the canner pays the grower and what the canner actually receives for his canned product shows a surprisingly similar figure. For example, although the price received for cherries in No. 10 cans was around \$11 to \$12 in 1927-28, the spread between the price paid the producer for an equivalent amount of fruit was \$3.24. For comparison, in 1931-32, when the price for cherries in No. 10 cans was from \$4 to \$6 per dozen, the spread between the price paid the producer for an equivalent amount of fruit was \$2.84. When it is remembered that labor and commodity prices fell considerably during this period, the evidence is fairly good that the canner has been operating on a fairly close margin.

An additional conception brought out by this study and worth retaining in the memory is that the average spread for the eight years from 1927 to 1934 has been \$2.76. Then, since it takes about 100 pounds of fruit to make a dozen No. 10 cans, the price which the producer will receive for his fruit will be the price for which the canner can sell his canned product less the spread. The spread will vary from year to year depending upon a number of factors, but the general relationship makes a useful picture to grasp and retain in trying to evaluate trends in the cherry industry.

What of the Future?

What of the future? Well, the 1934 pack of 80,000,000 pounds of pitted red cherries is said to be equivalent to one-half of a cherry pie per person per year. This consumption is considerably below that of other processed fruits, and when it is considered that prices have been lower than for other fruits since 1931, it would seem that an increase in consumption might be expected. It is said that there are a great number of people who have never tasted a cherry pie, inconceivable as this sounds. Markets have been gradually enlarged, but the outlet has not kept ahead of the increase in pack.

Since for the purpose of this discussion we are interested in what the grower may receive, and therefore, whether he will increase his plantings, it must be said that there does not seem to be any prospect for canned cherries' selling at a price higher than that for other competing fruits used as pie fillers. The price paid producers will approach the price for other similar products at that time, so as to give the processors their operating costs plus a reasonable profit. This means that during the next ten years cherry production for canning or frozen pack is only warranted where pro-

duction costs can be kept below the average predepression prices for cherries. Marginal orchards, or orchards where the cost of production is above this average, must find some other outlet for their fruit or go out of business.

Other Considerations.

Against this view of the situation is the ever-present hope that something may turn up. One of these possibilities is the increase in use of cherries in No. 2 cans. In the past the sale of cherries has been largely in No. 10 cans and in barrels. There is indication that there is an outlet for small cans in direct competition with other similar fruits, and that with modern, low-cost methods of growing, harvesting, pitting and canning, the red cherry may find its way

into more homes than it has in the past.

To add to this is the havoc of the severe winter of 1933-34. Many orchards throughout the east have been killed outright. Many more have been seriously crippled. It is the feeling in many parts that some of these crippled cherry orchards will be out of production within three to five years. All in all, therefore, while a review of this able report by Dr. Marshall does not show any spurt ahead in the sour cherry industry, and while it insists that only the best favored orchards will be able to make a profit, yet it does seem to show that the worst is over and that a sane program of development may be expected to bring order out of what has been a most chaotic situation during the years since 1930.

Progress in Arboretums

A. A. N. Committee Report on Arboretums and Botanical Gardens Submitted by Robert Pyle, Chairman

The activities of the committee on arboretums and botanical gardens during the past year have been much less vigorous than during some previous years for two reasons, because activities along the line of the development of arboretums have appeared to be at rather low ebb and because your committee had been warned to keep expenditures to a minimum.

Were this association financially equipped to support a vigorous movement in favor of the establishment of additional arboretums in America, and were your committee free to devote time that would be required for a vigorous campaign, it is conceivable that there has been no time in the history of our organization when as much real progress might be made as during the era through which we appear to be passing. We refer to the national economic situation, to great numbers of unemployed and to the fact that both federal and state funds are being made available for the promotion of public work. Were your committee equipped with time and financial resources, much more might be done particularly along the line outlined by the chairman of your committee before the American Institute of Park Executives at the annual convention at Washington in 1933, advocating that every first-class park, which could command the resources, would do well to map out and as fast as practical to carry out the project of an extension to its present park development in the way of a well conceived and appropriate arboretum.

It is suggested that members of the American Association of Nurserymen may, by reason of their own acquaintance and contacts with park executives, be able to exert an influence that will suggest and stimulate interest along these lines, especially at a time when governmental funds may prove to be available for the development of such projects.

Within the past year a visit to Shaw's Garden, at St. Louis, afforded the opportunity to study the extensive developments that have taken place there within the past few years. The sale of a considerable tract of land within the city limits at a price helped

to make possible the purchase of a much larger tract twenty-four miles outside the city, known as the Gray extension, of 1,600 acres. Considerable progress has already been made toward appropriate treatment and laying the foundations for what will form one of America's greatest tree collections. A first-hand inspection of the area serves to reveal the high type and variety of technical experience absolutely essential for a staff that would plan and plant in appropriate arrangement representatives of all the great tree families in such fashion as to prove its value to future generations. We were indebted to Supt. G. H. Pring and Paul A. Kohl for this inspiring visit, and to Dr. Moore, director and leader in this great development.

The past year has also been marked by several visits to Washington, where plans for the national arboretum are slowly going forward. Over 800 acres have been set aside, known as the Mount Hamilton tract, lying between the Anacostia river and the Bladenberg road; the ground is being cleared in places, and under the direct supervision of B. Y. Morrison, of the Department of Agriculture, the plans for the future development of the garden are gradually taking shape.

As regards the United States Botanical Gardens under the direct control of the joint committee of the Library of Congress, appointed by the Senate and by the House, a word is in order. This institution is at present conducted by Mr. Lynn, architect of the Capitol grounds. In the luxurious buildings recently completed are some interesting horticultural specimens, which make it an entertaining place to visit, in Washington, D. C.

But the possibilities of these buildings and their location at the foot of Capitol Hill and adjoining wide open squares that are devoted to parks make particularly attractive the prospect of having these buildings generally used also for the purpose of important flower shows that may be appropriately staged at our national capital. The need for such has become even greater as a result of the demolition of the greenhouses in front of the main building of the Department of Agriculture,

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where heretofore have been staged the shows of amaryllises, chrysanthemums and other flowering plants in which the Department of Agriculture has taken particular interest. Furthermore, there are those who, because of the purpose which it now does and the greater purpose it may yet serve, have suggested that they would like to see the name of this group of buildings administered by the Library Committee of Congress changed to the National Botanical Conservatories, which in fact they are.

At present certain Congressmen are developing plans for the inauguration of the greatest botanical garden and arboretum in the world, which is indeed an alluring dream.

It seems to your committee that such a dream as is proposed would be deserving of stronger support on the part of nurserymen if those Congressmen whose active leadership gives force to this movement were not equally eager and enthusiastic about promoting the project on the ground of the philosophy "that the ties formed between a Congressman and his constituency may be greatly strengthened and a truly happy response had if said Congressman may indulge the privilege of distributing among his constituents from time to time certain plants which reach the recipient with the honor of having been sent from the United States Botanical Gardens." The thought involved "does not for a moment contemplate the possibility of the Congressman's needing or winning support for reelection, but rather that such distribution goes far toward developing the demand on the part of the people back home for a bigger and better arboretum and botanical garden for the United States than is to be found anywhere else in the world."

Other items of note in the realm of arboretums and botanical gardens are:

1. The transfer of Dr. E. D. Merrill from the Bronx Botanical Garden to Harvard.

2. That Mr. Bartlett, heretofore director of botany at the University of Michigan, goes to the Philippine islands to take a similar position in building up the department of botany in the University of Manila.

3. Perhaps the outstanding event in this field for the past year has been the celebration of the twenty-fifth anniversary of the founding of the Brooklyn Botanic Garden, marking a greater achievement in building a famous and useful institution. In addition, the exercises consisted of a series of addresses which form a valuable compendium of the development to which thought in this vast field of interest to all nurserymen has reached in this year of 1935. A copy of the report is worth the time and attention of every nurseryman who would maintain a broad interest in his chosen field.

NURSERY OFFERS RARE SIGHT.

An unusual scene at the nursery of Eli D. Ray, El Paso, Tex., this season has been a group of five Agave americana, with three plants in bloom the same year. These plants bloom but once in their lifetime, dying at the termination of blooming and developing seed pods from reserve strength in the bloom stem. The plants at the Ray nursery were about 17 years old, and the flowering stems attained a height of twenty-two feet.

Current Flowering Plants

**Woody Plants That Flower in Late Summer in Central Ohio Described
by L. C. Chadwick, with Comments on Their Use in Landscape**

In previous articles I have discussed many of the woody trees and shrubs that flower during the spring and summer months. We may conclude this discussion of blooming dates for the present by giving some attention to those plants that bloom during August, September and in a few cases even later.

In most landscape plantings one will notice few woody plants in flower at this time of year. *Buddleia*, *hibiscus*, *Hydrangea P. G.* and *vitea* are the most conspicuous. In addition to the *hibiscus*, *Abelia grandiflora* and *Schumannii*, *Bignonia tagliabriana* Madame Gallen, *Clethra alnifolia*, and some species and varieties of *hypericum*, *spiraea* and *symphoricarpos* have flowered more or less continuously since early and mid-July. Among the woody plants that flower predominantly in August and September are *Baccharis halimifolia*, *Buddleia Davidi* and varieties, *Calluna vulgaris* and varieties, *Caryopteris incana* and *tangutica*, *Clerodendrum fœtidum* and *trichotomum*, *Clematis apiifolia*, *paniculata*, *tensis* and others; *Evonymus patens*, *Gordonia* (*Franklinia*) *alata-maha*, *Hamamelis virginiana*, *Hydrangea paniculata grandiflora*, *Lagerstroemia indica* and varieties, *Sophora japonica*, and *Vitex Agnus-castus*, *Negundo* and varieties. But a few of these plants can be discussed in some detail at this time.

Calluna Vulgaris.

Anyone who has seen good plants of heather in bloom desires to have some in his garden. It is interesting to note that considerable advancement is being made in growing them satisfactorily to the point where they are listed in a number of nursery catalogues. Heather is not unlike most of the rhododendrons in its cultural requirements; consequently, we do not expect to see them in abundance in localities with hot, dry summers or cold, dry winters until more sturdy types are developed. Those who have visited the Arnold Arboretum in August have no doubt marveled at the success being obtained there with these plants. As this article was being prepared, there came to my desk the August issue of the bulletin of popular information from the Arnold Arboretum, which contains some specific information of the best varieties and cultural conditions of *calluna*. The cultural practices noted may be briefly summarized by the few following statements. Beds are best developed by setting pot-grown plants early in the spring close together in a good rhododendron soil. Each winter the plants should be given a light covering to protect them from the sun and wind. This covering should be light enough to allow ample air circulation about the plants. A coarse hay has been found useful. When the plants have thickened into a mat in the beds, the long, straggling branches should be clipped each spring to give an attractive appearance. The beds are top-dressed each year with well rotted oak

leaves, although any good rhododendron compost should be satisfactory.

The following six varieties are among those that have proved the most satisfactory at the arboretum: *Alba*, pure white flowers; *coccinea*, reddish purple flowers; *cuprea*, coppery red foliage in winter and early spring; *hirsuta*, grayish green foliage and spreading branches; *multiplex*, double pink flowers; *nana*, dwarf type, with short branches. These little plants, usually eight to ten inches high, are very effectively used in beds on low banks in sunny situations, as rock garden subjects and for edging beds of broadleaf evergreens such as rhododendrons and mountain laurel. Propagation may be by seed handled similarly to those of azaleas and rhododendrons or by cuttings taken during the winter and handled similarly to other evergreen cuttings.

Caryopteris Tangutica.

Caryopteris tangutica is a striking ornamental plant that is relatively new, having been introduced from northwest China in 1915. It is closely related to the plant listed as blue *spiraea* or blue-beard, *Caryopteris incana*. From observations of the habit of growth and flowering characteristics of *Caryopteris tangutica* during the past four years, it appears to be superior to *Caryopteris incana*, at least in the vicinity of Columbus, O. *Caryopteris tangutica* is a smaller, more refined plant, reaching to a height of four to five feet at maturity and forming a dense, rounded mass. The violet blue flowers appear the latter part of August and continue to be effective until nearly frost. The serious objection of tenderness of *Caryopteris incana* is partially overcome in *Caryopteris tangutica*. Even following the severe winter of 1933-34, plants were damaged but little. It is probable that plants of this species could be handled the same as those of *C. incana* in colder localities. The practice of cutting them to the ground each spring does not prevent the production of bloom in the fall from the new wood that is produced. *Caryopteris tangutica* does not appear to be exacting in its soil requirements, although a rather light, well drained soil, conducive to early maturity, should increase its hardiness. Its use in landscape plantings is due to its flowering habit, its blue flowers in late summer. Softwood cuttings and layers afford means of propagation.

Clematis.

In one of my articles some time ago mention was made of the species and varieties of *clematis* and their cultural requirements. At that time the small-flowering species, *C. paniculata*, often considered the best fall-flowering vine for northern localities, and *C. tensis*, with its scarlet flowers, were mentioned. Another species, *C. apiifolia*, seems worthy of mention. It is probably not so showy as *C. paniculata*, but nevertheless its white flowers are produced abundantly and are very effective. This

species is a good grower and reliably hardy at Columbus.

Evonymus Patens.

In the article in which I discussed plants blooming in late June distinguishing characteristics between *Evonymus patens* and *Evonymus radicans* *Carrierei* were given. Chief among these was the difference in flowering date. I mention this again at this time because *Evonymus patens* has been in full flower. *Evonymus radicans* *Carrierei* now has its fruits well developed. In addition to the characteristics of *E. patens* mentioned in the past article that make it less desirable than *E. radicans* *Carrierei* as an ornamental shrub, may be noted the fact that flies are attracted to its flowers in great numbers. Nurserymen and landscape gardeners will do well to stress *Evonymus radicans* *Carrierei* rather than *Evonymus patens*.

Sophora Japonica.

While *Sophora japonica*, the Chinese scholar tree or Japanese pagoda tree, as it is often called, is not at all a new introduction, it is far too seldom seen in ornamental plantings. Even though growth is slow and plants are long in coming into bloom, nurserymen can well afford to propagate this plant and landscape men may well find use for it in many situations, especially as a lawn and street tree. Although plants may reach a height of seventy-five feet or more, they are usually much smaller, hardly exceeding fifty feet and forming a round head. Plants do well in average soil and where subjected to drought and city conditions. Insects and diseases seldom trouble it. The small leaflets cast a light shade, allowing the ready growth of grass beneath it. Creamy white, occasionally pinkish, flowers are produced in loose terminal clusters the latter part of August. A weeping form, *Sophora japonica pendula*, may find limited use in ornamental plantings. Propagation of the species is best by seeds sown as soon as ripe or stratified overwinter and sown the following spring. If the latter method is followed, it is well to soak the seed in hot water before sowing, as is best with most leguminosae seed. The variety is propagated by grafting it onto the type.

Vitex.

Two species of *vitex* are commonly cultivated, *Vitex Agnus-castus* and *Vitex Negundo*. The latter species is not often seen, but its variety *incisa* is becoming more and more plentiful. It is more hardy than *Vitex Agnus-castus* and, with its finely cut foliage, graceful habit of growth, and lilac lavender flowers, it is one of our most outstanding fall-flowering shrubs. The more common *Vitex Agnus-castus* is usually more showy in flower because of its longer racemes of flowers, but is not so graceful in growth. A white-flowering variety, *V. Agnus-castus alba*, is occasionally found in the trade. Another

listed by a number of nursery concerns is *Vitex macrophylla*. This type promises to be the best one so far introduced. The leaves are larger and the lavender blue flowers are produced from July till early frosts.

For flower display and attractiveness in landscape plantings, the species and varieties of vitex are more worthy than the buddleias. They do well as specimens or as plants in the herbaceous or woody border. Because of their tenderness, it is best to cut them nearly to the ground each spring. Light, well drained soils will aid hardiness. Propagation is easily accomplished by seeds or softwood cuttings.

ORIENTAL POPPIES.

Data on Culture and Varieties.

Hybridization of oriental poppies has resulted in providing gardeners with these flowers in a range of colors diverging widely from the hue of the old red poppies that were frequently in disfavor as garden material. Today the range of shades includes old rose pink, lilac rose, golden orange, coral pink, carmine, flame-scarlet, shrimp-pink, cerise and others which harmonize in the spring flower displays.

A recent catalogue, "Oriental Poppies and How to Grow Them," issued by the Siebenthaler Co., Dayton, O., contains one of the most comprehensive lists of oriental poppies available, describing about eighty varieties. The publication is also exceptionally useful for the many points therein given on growing poppies. These cultural suggestions are worthy of note.

Planting.

The best time to plant oriental poppies, it is stated, is in July and August. The rest of the year, even through the winter months, the plants are in active growing condition. The dormant season, unlike that of most other plants,

is midsummer, and if the plants are moved then good results are sure to be obtained. The clumps increase with age and can be left in the same spot for years.

In any good garden soil, it is said, oriental poppies will thrive, whether it be sandy, loamy or clay soil. However, the plants must not stand in water for any prolonged period; the water level should, in fact, be more than six inches below the surface of the ground. The plants do not seem to be demanding regarding lime or acid soil, but they should not have strong fertilizer in any form about them. Leaf mold is the best source of food for the plants.

Color Combinations.

Oriental poppies have long suffered from the reputation of not harmonizing with other garden flowers. Modern varieties, however, include many that will go well with any other garden flowers. A pretty combination is a soft pink poppy, such as Watteau or Pink Beauty, with Delphinium Belladonna or Madonna lilies. Another good combination is the variety Welcome used with regal lilies against a background of mock orange.

Of course, the promiscuous use of the old-fashioned seedling oriental poppies does create a clash of colors in the garden, but a little forethought in the proper selection of named varieties will avoid any such criticism. The deep red oriental poppies always make a splendid appearance where they can have a background of evergreens or white-blooming shrubs, such as some of the syringas.

Oriental poppies are not ordinarily susceptible to any disease or the attacks of any insect pests. About the only care necessary is the usual cultivation and weed control. When new plants are entering their first winter it is well to mulch the surface of the ground under the leaves of the plant with a light layer of excelsior or straw. Newly planted poppies require moder-

ate watering if a dry season should prevail following their planting.

Recent developments in the varieties of oriental poppies have extended the period of bloom greatly. With the proper selection of varieties, the poppy season can now be extended over a period of nearly six weeks, beginning May 15 and ending July 1. The earliest variety to bloom is the double, orange-colored variety, Olympia. May Queen and Harmony follow close. Other varieties blooming before June 1 are Henri Cayeux, King George and Beauty of Livermore.

The first half of June brings Lula A. Neeley, Purity, Enfield Beauty, Cerise Beauty, Julia Buck and Mahony into bloom. These are followed by Lightness, Salmon King, Gaiety and Joyce and still later by Perfection, Perry's White, Wunderkind, Mandarin and Trilby. The season is usually ended with the last flowers of Mrs. Stobart, Loreley, Colonel Bowles and Echo.

Cut Flowers.

When properly prepared, poppies will retain their freshness as long as many other varieties of garden flowers. The newly opened flowers or buds that have burst and are showing color are the ones to cut. The ends that have been cut should be burned in a blaze until they have been charred to a length of one or two inches. Then immerse the stems in cold, deep water and place the container in a cool, shaded location for a couple of hours, after which time the blooms can be arranged in a suitable bouquet. If fresh, cool water is added twice a day, the flowers will give surprising results.

IN COMMEMORATION of the Belgian horticulturist, Louis Van Houtte, famous as a hybridizer, a horticultural exhibition was recently held at Gendbrugge, near Ghent, Belgium. One of his sons, although well on in years, was present at the commemorative festival.

FIVE FALL BUYING ISSUES

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Early inquiries indicate that the autumn demand for stock will be heavier than for several seasons. A still greater upturn is expected in spring. Large dealers and catalogue houses already are seeking to locate sources of supply.

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NEW PLANT PATENTS.

It has been announced by Rummeler, Rummeler & Woodworth, Chicago patent lawyers, that the following plant patents were issued August 13:

No. 130. Rose. Abner Marshal Lowman, Elmira, N. Y., assignor to the United States Cut Flower Co., Elmira, N. Y. A variety of rose characterized particularly by the distinctive yellow color of its flowers, its relative freedom from thorns and spines, its foliage of a distinguishing green color, its vigorous growth and free blooming and its resistance to fungous diseases.

No. 131. Rose. Jean H. Nicolas, Newark, N. Y., assignor to the Jackson & Perkins Co., Newark, N. Y. A new and distinct rose plant, characterized importantly by the great hardness of the plant and the new type and color combination of abundant blooms in a hardy polyantha variety, susceptible of being grown to exhibition hybrid tea size and quality.

No. 132. Rose. Jean H. Nicolas, Newark, N. Y., assignor to the Jackson & Perkins Co., Newark, N. Y. A new and distinct variety of rose plant, characterized by its habits of growth, which permit of diversity of usage as a pillar, everblooming hybrid perpetual shrub or bedding plant, and its greater resistance to cold than any other everblooming shrub or bush rose, combined with the color and strong fragrance of its blooms.

No. 133. Carnation. Adolphe Frederick Jacob Baur, Indianapolis, Ind., assignor to Baur-Steinkamp & Co., Indianapolis, Ind. A variety of fragrant medium pink carnation, characterized particularly by its heavier stems and the distinctive blue green color of its leaves and stems, its strong nonsplitting calyx, its fuller flowers of the color shade described and its habit of producing more flowers in a shorter time after rooting than occur in other somewhat similar medium pink varieties.

"THE GARDENER'S HOW BOOK."

Those who have to answer the questions of gardeners—no less than the gardeners themselves—will undoubtedly appreciate the work done by Chesla C. Sherlock in a recent volume, "The Gardener's How Book," published by the Macmillan Co. In this book the author has attempted, apparently quite successfully, to provide the answers for all those stock questions that the amateur is usually bound to ask. The writer is experienced in his subject, well known for his editorial work on such magazines as *Better Homes and Gardens*, the *Ladies' Home Journal* and *St. Nicholas*. He is also a noted lecturer on gardening topics. The present volume is declared to be his reply to the thousands of questions that have been asked of him in his capacity as garden expert.

Mr. Sherlock discusses all types of flowers—annual, biennial, perennial, bulbous. He lists the varieties, suggests color combinations for the garden and gives clear and full directions for planting and culture. There are also chapters on rock gardens and pools, on the care of plants in the house, the construction and use of greenhouses and coldframes, the planting and care of trees, shrubs, vines, hedges and lawns; the principles of landscaping, plant breeding, window boxes, labels, pruning, etc. The author even discusses the arrangement of cut flowers and how to keep them fresh. Thirty-eight chapter headings are listed.

There are over forty half-tone illustrations to supplement the text. These vary from progressive views on a landscaping project to close-ups of gardening activities, such as transplanting and grafting, that seem to have been especially prepared for the purpose. Tables and charts are used to advantage in presenting data concisely.

The cloth-bound book, consisting of 358 pages, including a bibliography, is offered for sale at \$3.50 per copy.

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CATALOGUES RECEIVED.

[In writing for a copy of any of the catalogues reviewed below, please mention that you saw it described in *The American Nurseryman*.]

Charles F. Barber, Troutdale, Ore.—A folder describing delphiniums, heucheras, Japanese irises and a number of other specialties from Hoodacres.

Chugai Nursery Co., Kobe, Japan—Descriptive catalogue of seeds of trees, shrubs, perennials, lilies, flowers and vegetables, as well as tree and herbaceous peonies, Japanese maples, bulbs, etc. Edgar L. Kilne is the firm's agent in this country.

William N. Craig, Weymouth, Mass.—Autumn price list of hardy lilies and Dutch bulbs for the 1935 season. An extensive list of lily bulbs is given first place and is supported by a large selection of lily seeds. The bulb offers include tulips, irises, narcissi, clematis and most of the miscellaneous spring-flowering items.

Bobbin & Atkins, Rutherford, N. J.—Circular for florists in which are described and illustrated forcing items for greenhouse use. The azalea selection includes both the large-flowered Belgian types and the hardy Kurume and Japanese evergreen types. Hydrangeas, lilacs, spiraeas, roses and others are listed, along with a good selection of decorative and foliage plants.

Cunningham Gardens, Waldron, Ind.—Wholesale price list of peonies and hardy phlox seedlings, along with a few miscellaneous items, such as anemones, *Dicentra eximia*, *Lilium umbellatum*, etc.

Brown Bros. Co., Rochester, N. Y.—The annual descriptive catalogue of the Continental Nurseries, in which is a large collection of material is offered, together with many suggestions on home planting. Perennials, bulbs, ornamental trees and shrubs, fruit trees, etc., are listed in up-to-date varieties.

Storrs & Harrison Co., Painesville, O.—Special fall offer of perennials and other timely items, such as pansy seeds, callas and grass seed.

T. Sakata & Co., Yokohama, Japan—1935 edition of the firm's special catalogue devoted to lily bulbs. A foreword states that the bulb de-

partment has increased its turnover considerably and much effort is being given to developing strong, clean strains for distribution to the growing trade.

Poole's Choice Plants, Greeley, Colo.—Annual summer and fall price list, including peonies, irises, a group of selected Dutch bulbs, bulbs for the rockery, etc.

American Forestry Co., Pembine, Wis.—Catalogue of forest, fruit and ornamental trees and shrubs, cuttings, seedling and transplanted evergreens; ferns, roses and peonies. Material for windbreaks is featured. The firm is a large grower of evergreens and ornamentals. It is stated, and can supply some seeds in these lines.

H. A. Hyde Co., Watsonville, Cal.—A 32-page catalogue featuring chiefly spring-flowering bulbs. Narcissi are represented in splendid fashion. Novelties include new Chilean and South African Cape bulbs and native California bulbs. A section of several pages indicates the choice selection of trees, shrubs and other plants carried by this firm. Native plants are well represented.

ROSE SOCIETY SECRETARY.

On Saturday, August 17, the executive committee of the American Rose Society selected R. Marion Hatton, West Grove, Pa., to serve as temporary secretary of the society, an action made necessary by the sudden death a week previous of the active secretary, G. A. Stevens.

It is expected that Mr. Hatton will assume the supervision of Breeze Hill Gardens, at the residence of Dr. J. Horace McFarland, Harrisburg, Pa., a position held by Mr. Stevens at the time of his death.

Summer Meetings

Held by State Associations

VIRGINIANS ELECT.

After enumerating briefly some of the things that had been done by the Virginia Nurserymen's Association during his term of office, Fred Shoosmith, of South Richmond, president, made a strong recommendation before the fourth annual convention of the Virginia Nurserymen's Association, at Ocean View, August 12 and 13, for legislative action in regard to sale of nursery stock in Virginia.

T. D. Watkins was chairman of the committee handling legislative matters. He presented a report from his committee, formulated in cooperation with G. T. French, state entomologist. Briefly this report suggested a registration fee of \$10 for all Virginia nurserymen, dealers and collectors; a fee of \$1 for each agent, and a fee of \$10 for each agent of an out-of-state nursery who himself delivers.

It was proposed that all fees for out-of-state nurseries be eliminated and out-of-state shippers of nursery stock be allowed to forward their products into Virginia after they file a valid official inspection certificate with the state entomologist. It was also proposed that an inspection fee of 10 cents per acre be charged Virginia nurserymen. Chain stores, nurserymen and others would be charged a registration fee of \$10 for each separate name under which a business is conducted. There were other minor features recommended in the original report.

After considerable discussion, the question was put to a vote, and a tie resulted.

The matter was carried over to the second day and the committee was allowed time to make certain revisions. The revised report, as presented by the chairman next morning, proposed that a registration fee of \$20 be levied on all Virginia nurserymen and that the per acre inspection fee be eliminated. This report was adopted.

It is evident that these legislative proposals are going to create considerable interest among the nurserymen in the state, the large majority of whom operate small areas. More than one-half of the registered nurserymen in Virginia have three acres or less. Probably not more than five per cent have 100 to 350 acres. Some of the nurserymen do not feel that the grower of three acres, the inspection of which requires but a few minutes, should pay the same tax as a grower with 350 acres, inspection of which might sometimes require several days.

Soil-erosion control was discussed by P. F. Keil, regional director, soil-erosion service, Chatham, Va. He referred to types of plants that are being used in this work.

The nurserymen were interested in a talk by Dr. H. H. Zimmerly, director of the truck experiment station at Norfolk, on "Fertilization of Trees and Shrubs."

One of the most interesting talks at the meeting was made by H. J. Neale, landscape engineer, Virginia state highway department, Richmond, on "Virginia Waysides." The Virginia highway department, up to this time, has

secured all plants, other than collected plants, from nurserymen in Virginia.

The water was a little rough, but this did not interfere with the fishing trip planned for the nurserymen. Prizes were offered to the man and the woman catching the largest fish. The prize in the men's class was won by L. L. Westcott, of Falls Church, and the prize in the women's class by Mrs. Westcott.

The officers elected for the coming year are T. D. Watkins, Midlothian, president; Kenneth McDonald, Hampton, vice-president, and Mack Semple, Richmond, secretary and treasurer.

Fred Shoosmith, South Richmond, former president, became chairman of the executive committee. L. L. Westcott, Falls Church, was elected as a new member. These two, with the officers, compose the executive committee for 1935-36.

Charlottesville was selected as the place of the next meeting, the date to be the Monday nearest August 15, 1936.

NORTH JERSEY GROUP TOURS.

August 14, the North Jersey Metropolitan Association of Nurserymen held its second tour designed to acquaint the members with the stock in which each is specializing. The start was from the Richfield Nursery, Clifton. By noon the group was in Oakland, where lunch was served and most of the members en-

joyed a swim. Members' nurseries were visited again in the afternoon, and before supper time a short business meeting was held.

It was decided to hold the last open-air meeting August 28, when the final tour for the season was scheduled. It was also agreed to landscape part of the Hackensack Courthouse grounds August 30 and 31. E. M. Zegers, Acting Sec'y.

PENNSYLVANIA TAKES LEAD.

Meeting at the Keystone hotel, Pittsburgh, on the evening of August 14, the Pennsylvania Nurserymen's Association discussed the A. A. N. revitalization plan and passed a resolution presented by Robert Pyle, as chairman of the Pennsylvania association's revitalization committee, to take the lead in bringing state organizations into a coordinated program of action. The resolution reads as follows:

Resolved, That our executive committee be directed to appoint with power one or more representatives of the Pennsylvania Nurserymen's Association (i. e., at the rate of one for every fifty members):

That it shall be the duty of such appointees to represent the Pennsylvania Nurserymen's Association in all its relations with similar representatives appointed by other state or local nurserymen's organizations which give promise of working for our mutual benefit, also in all our relations directly or indirectly with the American Association of Nurserymen;

That the officers of this association be authorized to pay the expenses incurred by such representatives in their work for this association.

The meeting followed an all-day outing and picnic held by members of the Pennsylvania Nurserymen's Association, the Western Pennsylvania Nurserymen's Association and the Lake County Nurserymen's Association, the latter from over the line in Ohio. At John Eisler's farm, near Evans City,

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FAIRVIEW EVERGREEN NURSERIES
Fairview, Erie County, Pa.

games were enjoyed and then a supper of wieners and corn.

Louis Strassburger, president of the Pennsylvania association, was named general chairman of the meeting in the evening, Albert F. Meehan acting as secretary. Routine business was suspended so as to give ample time for discussion of the subject of revitalization. One resolution was passed first, of sympathy in the death of Arthur Pride, a young man of 22, who had been buried that afternoon.

SCHOOL PLANTING PROJECT.

Hicok Nurseries' Plans Win Contract.

Recently awarded to the Hicok Nurseries, Sacramento, Cal., was a contract to landscape the grounds about the new Woodbridge school at Roseville, Placer county, Cal. The work of planting will be started about October 1.

The plans call for shade trees to inclose a large playground, as well as a grouping of native trees, shrubs and plants on an area 35x330 feet following the road. One of the most interesting features is a native trail among the California species of plants, by which it is hoped to educate the children in regard to the flora of the state and also to provide lessons in conservation.

It is this firm's belief that landscape plans should be given attention in the very beginning, right along with the architect's plans. Under such a condition walks, drives, gratings, sprinkling systems, etc., can be worked into the job as the builders are doing their part. In line with this, I. B. Hicok, manager of the nursery, offered plans and figures for the landscaping of the school at the time bids from the contractors for the construction work were opened last February. The award on the landscaping work was made August 1.

Success in Depression.

The Hicok Nurseries started in business in Colusa, Cal., in the fall of 1929, just as the depression was beginning. Sales showed little falling off at first, but as they began to diminish, definite steps to build up trade were undertaken.

It was first decided to enlarge the firm's market, and sales were consequently sought in adjoining counties, with surprising success. Again, if a customer wanted stock from a nursery but had no cash, barter or trade was resorted to, to make the sale. The firm's experience in this field was exceedingly interesting, and the plan worked wonders, Mr. Hicok says. Advertising was not neglected, and more pressure was put on the selling end of the business. At the same time, efforts were made to give a class of service better than anything the customers had been accustomed to. The result, of these labors was a steady increase in yearly sales right through the depression years.

Two years ago, the firm moved to Sacramento, where it is continuing to develop and enlarge its business. Recently it sold the Colusa nursery establishment to Paul Terry, who was employed by the firm for the last three years. The Hicok Nurseries make a specialty of public plantings, such as those required for parks and about schools, hospitals and county buildings. They have expanded their work in northern California, where many large jobs have been completed.

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These trees have been stake-trained and are almost as straight as a candle. Grown in good rich loam, with fibrous roots. 4 to 5 years old. Nicely shaped heads.

Height	Caliper	Per 100
7 to 8 ft.	1 1/4 to 1 1/2 ins.	40c
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9 to 10 ft.	1 3/4 to 2 ins.	55c
10 to 11 ft.	2 to 2 1/4 ins.	60c
11 to 12 ft.	2 1/4 to 2 1/2 ins.	65c

Caliper of trees taken 6 inches above ground.

In lots of less than 100 trees, add 20% to the 100 rate. Can load in full car lots, have Reading railroad siding on nursery farm, 35 miles southwest of Harrisburg, 10 miles north of Gettysburg. Can deliver by truck in radius of 500 miles at cost of trucking; can load 300 to 500 trees to truck; delivery would be in good condition, roots well protected. Small lots baled at cost of baling. No charge for loading in full cars or truck loads.

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Developing Day Lilies

*History of Hemerocallis to Present Importance
Related by Specialist in the Plant, Dr. A. B. Stout*

The day lilies are hardy herbaceous perennials of the lily family and half sisters, so to speak, of the true lilies. The lemon day lily, known botanically as *Hemerocallis flava*, and the tawny, or fulvous Europa day lily, known as *Hemerocallis fulva*, represent the general characters of the group. Further points of interest concerning the history of and present-day developments in day lilies were given in a recent extension bulletin of the New Jersey State College of Agriculture, New Brunswick, by Dr. A. B. Stout, specialist in these plants and director of laboratories at the New York Botanical Garden.

The native home of day lilies is in the temperate regions of Asia, chiefly in Japan, China and Siberia. Two day lilies had already been taken from the orient into Europe for culture as medicinal plants and as garden subjects at the time the first books were written about such plants—about 350 years ago. One of these was the lemon day lily; the other the fulvous Europa day lily. These two plants have been propagated continuously by division, and hence the many thousands of plants of each of these two types which now exist are branches of a clon that is at least 4 centuries old. This is a remarkable and unusual record, which attests to the vigor, the hardiness and the immunity to diseases which characterize the day lilies as a group and contribute greatly to their value as garden plants.

From time to time, other types of day lilies were brought from the orient to Europe and America until now at least fifteen distinct species are to be recognized. There is in these types a wide diversity in respect to stature of plants, habit of growth and season of flowering, as well as in the color, the size and the form of the flowers. In stature, there is a range of from about one foot to seven feet. The season of flowering extends from May until heavy freezes in October. The colors of the flowers include clear yellow and clear orange and orange in combination with fulvous red.

These wild types provide excellent material for hybridization and selective breeding. It is certain that other wild types remain in the orient to be discovered, introduced into culture and used in hybridizations in the further improvement of the group.

Early Hybridization.

Almost no improvement of day lilies has occurred in the orient. One interesting horticultural type which has double flowers has long been known in both Japan and China. Certain types have been cultivated in China for the flowers, which are used as food. But only a few of the hybrid day lilies now grown as garden clons originated in the orient. A garden clon, briefly, is a group of plants propagated vegetatively, in this instance by division.

In Europe the production of the horticultural day lilies began about 1890. Several species were being grown side by side in gardens and a few accidental hybrids appeared, but it occurred to the now well known horticulturist,

George Yeld, that the species of day lilies might be good subjects for hybridization and breeding.

Most of the hybrids of that early date involve the lemon day lily and the two semidwarf species, *Hemerocallis Dumortieri* and *Hemerocallis Middendorffii*. Some of these hybrids are excellent and will probably never be surpassed for their own respective classes. Of these, Estmere, Apricot, Sovereign, Gold Dust and Tangerine may be mentioned. These clons are semidwarf. They bloom in May and early June and the flower colors are yellow or orange. Soon several new species, *Hemerocallis Thunbergii*, *H. aurantiaca* and *H. citrina* were introduced, and these further stimulated deliberate hybridization.

Seedlings continued to appear either as chance hybrids or as the product of breeding endeavor until, in 1925, after a period of about thirty-five years, about 100 such plants had been named as horticultural clons. To some extent, most of these were propagated by nurserymen and grown in flower gardens. Some of these types, such as Luteola, Aureole and Florham, bloom in late June and July and were welcome additions to the group of garden day lilies.

Recent Work.

During the past ten years interest in day lilies has greatly increased and more attention has been paid to the growing of seedlings. As a result, another 100 horticultural clons have been named and at least 1,000 seedlings of merit have come into existence, from which selections are being made for introduction in the near future. Many are of no special merit and need not be considered for culture. In the development of any group of garden plants certain seedlings are named and introduced by persons who know few types and who have few seedlings from which to make selections. This has been and still is the case with day lilies. Some of the day lilies which would be rated high are similar to each other. A critical evaluation of all the day lilies now in the nursery trade would probably recognize twenty-five or thirty clons that are both excellent and distinctive. In fact, day lilies have become so diverse that this number of clons may be selected with-

out close duplication of type and character.

In stature there is a range from semidwarf plants, which are about two feet tall, to robust types, six feet tall. In the extreme habits of growth, there are drooping foliage and flower stems and stiffly erect foliage and scapes. There are clons that are strictly day-blooming, clons that bloom chiefly at night and others whose individual flowers last for two days. In respect to the season of flowering, a selection can be made of the varieties now to be obtained which will provide succession of flowers from the middle of May until late in August.

In respect to colors, there is a wide range in the shades of yellow and orange, both in clear colors and in combination with fulvous red. In some of the clons recently introduced, as the Mikado day lily, there is a conspicuous blotch of dark mahogany red in the midsection of each petal. There is also much diversity in the fragrance, form, size and shape of the flowers.

Collections.

Few have seen the twenty-five or thirty day lilies that represent the range of excellent horticultural types. The most complete collection of species, horticultural clons and seedlings in existence has been assembled at the New York Botanical Garden in New York city. Here are representatives of all the known species, various wild types thus far unnamed and all the horticultural clons that it has been possible to obtain. Special effort is made to obtain the new clons as soon as they are offered to the trade either in Europe or in America. Gardeners and nurserymen may visit this public display collection to observe and to compare the various day lilies and to make their own decisions regarding the relative merits of the selections that seem most desirable for culture.

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There are also at the New York Botanical Garden about 10,000 seedlings of recent breeding and about 500 seedlings that have been considered as the best among 50,000 seedlings grown during the past twenty years. These are being critically studied and compared, and the ones that are judged most excellent and distinctive will be named for propagation by nurserymen. There are always numerous plants in flower at any time from early May until late in autumn.

The Garden Club of America has recently adopted a plan for a 5-year study of the day lilies. Collections of the horticultural clones will be assembled in various gardens for critical comparison and evaluation. The results of these studies and tests will no doubt be of value in acquainting the general gardening public with the merits of the day lilies.

New Species.

Some report concerning the newest developments in the breeding of day lilies is of interest, and a few projects may be reported which illustrate what is being obtained and how the results are accomplished.

There is a dwarf species scarcely a foot tall called *Hemerocallis nana*, which grows wild in south-western China. It would seem that this plant would be a valuable subject for rock gardens, but it has not thrived under culture. This species was hybridized with a dwarf clone of the fully hardy *Hemerocallis Dumortieri*, and hardy dwarf hybrids have been obtained that promise to be excellent plants for gardens. Further selective breeding which is in progress aims to diversify this dwarf group in respect to color, size and form of flowers, to increase the number of flowers and to extend the season of blooming.

Certain plants obtained a few years ago from the wild in China proved to be a distinctly new type of day lily. The flowers are small and flower stems much branched and the season of flowering is in autumn. This species was named *Hemerocallis multiflora*. Plants of this late-flowering day lily were hybridized with nearly all of the other species, and several thousand seedlings, which give a wide range in form, size and color of flowers, were obtained. In the vicinity of New York, this species and its hybrids extend the season of flowering for day lilies through August, September and October.

A few wild plants obtained from north central China are to be classed in the species *Hemerocallis fulva*. But they differ from the known types of this species in having flowers of bright rosy pink. These plants were used in selective breeding and in hybridizations, and seedlings were obtained which have sprightly and even brilliant flower colors, including shades of attractive rosy pink.

To illustrate the results possible in selective breeding from the old types of day lilies, mention may be made of the origin of the Theron day lily, which has flowers of a dark mahogany red that approaches purplish black. This plant has in its ancestry the old familiar fulvous Europa day lily, the pale fulvous *Hemerocallis aurantiaca* and certain yellow-flowered types.

The first two generations of seedlings obtained were, as a rule, paler than the Europa day lily. But selections were made for both intensity and area of the

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5,000 **SPIRÆA**, Vanhouttei, 3 to 4 feet and 4 to 5 feet.

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10,000 **MAPLE**, Norway, transplanted, up to 3 1/2 inches.

3,000 **ARBOR-VITÆ**, Pyramidalis, up to 8 feet.

400 **PINE**, Mugho, from 2 to 4 feet.

1,000 **SPRUCE**, Norway, sheared, none better, 3 to 5 feet.

600 **JUNIFER**, Fötzer's, 5 to 8 feet spread, beauties.

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red pigmentation. After five generations of such selective breeding, plants were obtained which have the entire flower area outside the throat deeply and richly colored with dark red pigments. The most attractive and distinctive of these seedlings was named Theron. Thus a new garden class was developed from the old types.

Various nurserymen in the United States are now propagating certain of the older clons and there is considerable stock of some of these. The newer clons are also being propagated, but for most of these the supply of plants is limited. A rather large number of the best of the seedlings recently developed, such as the dwarfs, the autumn-flowering types and those with the dark red and the rosy pink flowers, now exist in single plants or as a few divisions. It will necessarily be several years before they can be made available.

BREEZE HILL CHECK LIST.

Recently issued was the eighth edition of the "Finding List of Plants at Breeze Hill Gardens," representing the collection to be found in the widely known and much visited test gardens maintained by the J. Horace McFarland Co. and in the permanent plantings about the McFarland residence at Harrisburg, Pa. The gardens have been the recipients of plants from sources in many parts of the world and are constantly receiving new introductions for test.

More than 750 varieties appear in the rose section, and there are important concentrations on other special groups. The 76-page list, however, is a general one, with many interesting interjected notes on sources and cultural practices. Besides indicating the location of the material at the gardens, the list mentions its source. (An excellent record of plant sources can be compiled from the names given.) The nomenclature is generally that of Standardized Plant Names. Other established reference works are followed in the case of groups, such as roses, lilies, etc.

STREETS of Moscow, U. S. S. R., will be planted with apple and other fruit trees instead of shade trees, according to an announcement published in the press August 17. The state farms have been ordered to cultivate 140,000 fruit trees to be planted along Moscow streets beginning in 1938.

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ROSE REGISTRATION.

The registration committee of the American Rose Society approved registrations of the following roses on August 7, 1935. Notice has been sent to foreign rose organizations and trade papers. If no objections are raised within six weeks after the date of this notice, the registration of these names will become permanent:

Gloriana, Hybrid tea. Originated by V. S. Hillock, Arlington, Tex. Probably a self seedling of Condesa de Santiago. The flower is described as unique and more like a gardenia than a rose. It averages thirty-five petals. The color is an intense lemon yellow, with occasional cerise markings and traceries dependent upon night temperatures. The plant is upright, with large, dark green foliage, and is a free bloomer throughout the season.

Miss Modesto, Hybrid tea. Originated by L. L. Brooks and introduced by Brooks & Son, Modesto, Cal. Reported to be a sport of Rev. F. Page-Roberts, with very large, very double, high-centered, pure yellow flowers. The plant resembles its parent in habit and growth. The originator claims that it is an extremely good bedding yellow rose and that it does well as a standard.

Rome Glory, Hybrid tea. Originated by Domenico Alicardi, San Remo, Italy. Introduced by the Jackson & Perkins Co., Newark, N. Y. Reported to be a cross of Dame Edith Helen and Sensation. The bloom resembles Dame Edith Helen in form, but is a deeper color, somewhat between red and pink, which does not fade or ever turn blue. The introducers claim that the lasting quality of the open bloom is amazing, the bloom remaining in good condition from bud to flower for nearly two weeks. Strongly fragrant with the old rose perfume.

Springtime, Hybrid polyantha. Originated by Howard & Smith, Montebello, Cal., and introduced by Henry A. Dreer, Inc., Riverport, N. J. Reported to be a seedling of Miss Rowena Thom crossed with an unnamed seedling. The plant is bushy, with leathery foliage, grows about eighteen inches high, producing clusters of semidouble flowers two and one-half inches across of a bright wild rose pink color, with a white center. Slightly fragrant. Claimed to be very useful for massing and bedding and to have considerable value as a cut flower.

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